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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/945,479	08/31/2001	Hui Hu	495392000100	3224
21186	7590	11/17/2004		
SCHWEGMAN, LUNDBERG, WOESSNER & KLUTH, P.A. P.O. BOX 2938 MINNEAPOLIS, MN 55402				
			EXAMINER BRANCOLINI, JOHN R	
			ART UNIT 2153	PAPER NUMBER

DATE MAILED: 11/17/2004

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary	Application No.	Applicant(s)	
	09/945,479	HU ET AL.	
	Examiner	Art Unit	
	John R Brancolini	2153	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 31 August 2001.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-17 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-17 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 31 August 2001 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
 2. ☐ Certified copies of the priority documents have been received in Application No. _____.
 3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- * See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|--|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892) 0 | 4) <input type="checkbox"/> Interview Summary (PTO-413) |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | Paper No(s)/Mail Date. _____ |
| 3) <input checked="" type="checkbox"/> Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08) | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152) |
| Paper No(s)/Mail Date _____ e | 6) <input type="checkbox"/> Other: _____ |

DETAILED ACTION

Claims 1-17 are pending in the application.

Priority

No claim for priority has been made. The effective filing date of the application is August 31, 2001.

Claim Rejections - 35 USC § 112

The following is a quotation of the second paragraph of 35 U.S.C. 112:

The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

Claims 6-7 are rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

Claims 6-7 recite the limitation "the at least one other receiving station" in claim 4. There is insufficient antecedent basis for this limitation in the claim. For examination purposes, the examiner is assuming the applicant intended the Claims 6 and 7 to read "The system of claim 5..."

Claim Rejections - 35 USC § 102

The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

Art Unit: 2153

(e) the invention was described in (1) an application for patent, published under section 122(b), by another filed in the United States before the invention by the applicant for patent or (2) a patent granted on an application for patent by another filed in the United States before the invention by the applicant for patent, except that an international application filed under the treaty defined in section 351(a) shall have the effects for purposes of this subsection of an application filed in the United States only if the international application designated the United States and was published under Article 21(2) of such treaty in the English language.

Claims 1-7, 9-17 are rejected under 35 U.S.C. 102(e) as being anticipated by Schneider et al. (US Patent 6222551), hereinafter referred to as Schneider.

In regards to claim 1, Schneider discloses a system for remote manipulation of image data comprising:

- A telecommunications network (col 3 lines 9-10).
- An image data storage library (col 3 lines 21-26).
- An image processing server coupled to the telecommunications network and further coupled to the image data storage library (a server is present for processing the images, containing a hard drive which stores the image data, col 3 lines 21-26).
- A plurality of receiving stations coupled to the telecommunications network, each of the plurality of receiving stations having a memory for storing local copies of state parameters (a plurality of receiving stations is described, col 3 lines 7-17).
- Wherein at least one of the receiving stations transmits state parameters through the telecommunications network to the image processing server (Figure 4A shows a client sending a request, step B, also see col 7 lines 29-45, col 8 lines 8-14).
- Wherein the image processing server receives image data from the image data storage library and processes the image data in accordance with the received

state parameters (Figure 4A, step E shows the server receiving the request, steps F and G show the server rendering the image as requested, also col 7 lines 36-43).

- Wherein the image processing server transmits processed image data through the telecommunications network to the receiving station (Figure 4A shows the server transmitting the image to the client, also col 8 lines 36-39).

In regards to claim 2, Schneider discloses at least one of the receiving stations transmits a request for processed image data through the telecommunications network and wherein the image processing server transmits processed image data to the receiving station through the telecommunications network in response to the request (the clients and server are connected by a telecommunications network, and the requests and responses are transmitted over this network, col 3 lines 7-11 and col 7 lines 36-41).

In regards to claim 3, Schneider discloses the image processing server transmits processed imaged data to at least one receiving station upon the completion of the processing of image data (Figure 4A step G shows the processing of the image data, step H shows the sending of the data, also see col 7 lines 52-61).

In regards to claim 4, Schneider discloses a first one of the plurality of receiving stations includes a user interface means for altering the local copy of state parameters and a means for transmitting the local copy of the state parameters, and wherein the

first one of the plurality of receiving stations transmits a copy of the local copy of the state parameters through the telecommunications network to the image processing server (Figure 4B shows a continuation of the process from Figure 4A, in this figure [4B] it is seen that the client can alter the state information of the view, step J, and retransmit a new request based on the current viewpoint state information).

In regards to claim 5, Schneider discloses a first one of the plurality of receiving stations includes a user interface means for altering the local copy of state parameters and a means for transmitting the local copy of the state parameters, and wherein the first one of the plurality of receiving stations transmits a copy of the local copy of the state parameters through the telecommunications network to the image processing server (Figure 4B shows a continuation of the process from Figure 4A, in this figure [4B] it is seen that the client can alter the state information of the view, step J, and retransmit a new request based on the current viewpoint state information) and wherein at least one other of the plurality of receiving stations receives the state parameters through the telecommunications network from the image processing server and stores a local copy in the memory of the at least one other of the plurality of receiving stations (new sets of state information may be sent to a plurality of clients, col 3 lines 42-49).

In regards to claim 6, Schneider discloses the at least one other receiving station transmits a request for processed image data through the telecommunications network and wherein the image processing server transmits processed image data to the receiving station through the telecommunications network in response to the request

(any of the plurality of clients can request data image information, col 3 lines 42-49 and col 7 lines 36-41).

In regards to claim 7, Schneider discloses the image processing server transmits processed imaged data to the at least one other receiving station upon the completion of the processing of image data (new sets of state information may be sent to a plurality of clients, col 3 lines 42-49).

In regards to claim 9, Schneider discloses a display means coupled to a user input device, the user input device including a means for manipulating the movement of a cursor displayed on the display means and a means for causing text and graphics to be displayed on the display means, wherein the state parameters include parameters indicating the location of the cursor on the display means and the location and content of text and graphics on the display means (each client has a user interface for manipulating the displayed image data, including storing viewpoint information based on cursor position, col 3 lines 26-33).

In regards to claim 10, Schneider discloses the image data are comprised of volumetric data (Figures 2 and 3 show various views of volumetric data available for rendering by the image server).

In regards to claim 11, Schneider discloses a system for remote manipulation of image data comprising:

- A telecommunications network (col 3 lines 9-10).
- An image data storage library (col 3 lines 21-26).
- An image processing server coupled to the telecommunications network and further coupled to the image data storage library (a server is present for processing the images, containing a hard drive which stores the image data, col 3 lines 21-26).
- A plurality of receiving stations coupled to the telecommunications network (a plurality of receiving stations is described, col 3 lines 7-17).
- Wherein the image processing server includes a first memory for storing a server set of state parameters, a server-side machine-readable medium, and a server-side processor that executes a first program stored in the server-side machine-readable medium, the first program causing the server-side processor to perform the steps of:
 - Controlling the reception of an update set of state parameters over the telecommunications network (Figure 4A Step E, col 7 lines 30-41).
 - Controlling the determination of whether the received update set of state parameters differs from the server set of state parameters in a manner which requires new processing of the image data (Figure 4A Step F shows the server setting up the view based on the parameters, col 7 lines 30-41 shows the server determining and producing new figures based on updates parameters).

- Controlling the processing of image data according to the update set of state parameters (Figure 4A Step G, col 7 lines 30-41 shows the server determining and producing new figures based on updates parameters).
- Controlling the transmission the update set of state parameters from the image processing server to the receiving stations (Figure 4A Step H, see also col 7 lines 41-45).
- Controlling the transmission of new image data from the image processing server to the receiving stations if the update set of state parameters required processing of image data at the image processing server (Figure 4B Steps M-O shows the server rendering and retransmitting processed image data if needed, col 8 lines 36-40).
- Wherein the plurality of receiving stations include a second memory for storing a local set of state parameters, a client-side machine-readable medium, and a client-side processor that executes a second prop-am stored in the client-side machine-readable medium, the second program causing the client-side processor to perform the steps of:
 - Controlling the transmission of a request for new state parameters to the image processing server through the telecommunications network (Figure 4A Step B, col 7 lines 30-36)
 - Controlling the reception of state parameters from the image processing server over the telecommunications network (Figure 4A Step C, col 7 lines 46-51).

- Controlling the determination of whether the received state parameters differ from the local set of state parameters and whether the received state parameters require non-local processing of image data (Figure 4A Step D and Figure 4B Step J shows the client receiving the updated image data and determining if an additional image data set is needed based on the viewpoint, col 7 lines 52-61).
- Controlling the transmission of a request for updated image data from the receiving station to the image processing server if a determination is made in the determining step that the received state parameters require non-local processing of image data (Figure 4B Step L, col 7 lines 58-61).

In regards to claim 12, Schneider discloses at least one of the plurality of receiving stations includes a user interface means for altering a set of state parameters stored in the memory and a transmission means coupled to the telecommunications network for transmitting the set of state parameters stored in the memory (Figure 4B shows a continuation of the process from Figure 4A, in this figure [4B] it is seen that the client can alter the state information of the view, step J, and retransmit a new request based on the current viewpoint state information, col 7 lines 52-61).

In regards to claim 13, Schneider discloses at least one of the receiving stations transmits a request for processed image data through the telecommunications network and wherein the image processing server transmits processed image data to the receiving station through the telecommunications network in response to the request

(the clients and server are connected by a telecommunications network, and the requests and responses are transmitted over this network, col 3 lines 7-11).

In regards to claim 14, Schneider discloses the image processing server transmits processed imaged data to at least one receiving station upon the completion of the processing of image data (Figure 4A shows the server transmitting the image to the client, see also col 7 lines 41-45).

In regards to claim 15, Schneider discloses a system for remote manipulation of image data comprising:

- A telecommunications network (col 3 lines 9-10).
- A communications server coupled to the telecommunications network (a server is present, containing a hard drive which stores the image data, col 3 lines 21-26).
- A plurality of receiving stations (a plurality of receiving stations is described, col 3 lines 7-17), the receiving stations including a first memory for storing a local set of state parameters, a first client-side machine-readable medium containing a pre-stored set of image data, a second client-side machine-readable medium, and a client-side processor that executes a program stored in the second machine-readable medium, the program causing the processor to perform the steps of:
 - Controlling the transmission of a request for new state parameters to the communication server through the telecommunications network (Figure 4A Step B, col 7 lines 30-36).

- Controlling the reception of state parameters from the communications server over the telecommunications network (Figure 4A Step C, col 7 lines 46-51).
- Controlling the determination of whether the received state parameters differ from the local set of state parameters (Figure 4A Step D and Figure 4B Step J shows the client receiving the updated image data and determining if an additional image data set is needed based on the viewpoint, col 7 lines 52-61).
- Controlling the processing of the pre-stored image data based on the received state parameters (Figure 4B Step Q shows the processing of the image data based on the received information, col 8 lines 40-46).
- Wherein the communications server includes a second memory for storing a server set of state parameters, a server-side machine-readable medium, and a server-side processor that executes a second program stored in the third machine-readable medium (a server is present for processing the images, containing a hard drive which stores the image data, a set of parameters for altering the image data, and memory of executing application data, col 3 lines 21-26), the second program causing the second processor to perform the steps of:
 - Controlling the reception by the communications server of an update set of state parameters over the telecommunications network (Figure 4A Step E, col 7 lines 30-41).

- Controlling the transmission the update set of state parameters from the communications server to the receiving stations (Figure 4A Step H, see also col 7 lines 41-45).

In regards to claim 16, Schneider discloses at least one of the plurality of receiving stations includes a user interface means for altering a set of state parameters stored in the memory and a transmission means coupled to the telecommunications network for transmitting the set of state parameters stored in the memory (Figure 4B shows a continuation of the process from Figure 4A, in this figure [4B] it is seen that the client can alter the state information of the view, step J, and retransmit a new request based on the current viewpoint state information, col 7 lines 52-61).

In regards to claim 17, Schneider discloses at least one of the receiving stations processes image data stored in the local memory according to the received set of state parameters (Figure 4B Step Q shows the receiving station processing and displaying the image based on the received data, col 8 lines 40-46).

Claim Rejections - 35 USC § 103

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

Claim 8 is rejected under 35 U.S.C. 103(a) as being unpatentable over Schneider in view of Stoltz et al (US Patent 6360250), hereinafter referred to as Stoltz.

In regards to claim 8, Schneider discloses allowing multiple receiving stations authorization to alter the state parameters (a plurality of receiving stations are present, each with the ability to request and alter the image data). However, Schneider fails to disclose granting authorization to one receiving station, or client, removing that authorization and granting the authorization to another client.

Stoltz discloses a system for authorization management and access control. In this system, authorization is granted to a client for a period of time, after which the server can revoke such authorization. After this revocation, the server can then grant authorization to another client for access (Abstract, also see col 3 lines 6-20). Stoltz shows that this method of monitoring authorization to the system provides a much higher level of access control.

It would have been obvious to one of ordinary skill in the art at the time of invention to modify Schneider to include granting authorization to one receiving station, or client, removing that authorization after a period of time and granting the authorization to another client as taught by Stoltz to provide a much higher level of access control.

Conclusion

The prior art made of record and not relied upon is considered pertinent to applicant's disclosure:


- Borrel et al. (US Patent 5448686), a system of creating multiple graphic representations of an image for display amongst a plurality of users.
- Jones (US Patent 6407743), a system of creating multiple appearances of an object by using a set of weighted state parameters.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to John R Brancolini whose telephone number is (571) 272-3948. The examiner can normally be reached on M-Th 7am-5:30pm.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Glenton Burgess can be reached on (571) 272-3949. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).


JRB


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